

In the claims:

1. (Amended) Apparatus for improving the measurement of force variation in a tire being tested on a tire uniformity machine, comprising:
 - a) a loadwheel assembly including a rotatable loadwheel;
 - b) load sensors for detecting forces imposed on said loadwheel by a tire being tested;
 - c) one or more accelerometers ~~vibration sensor~~ for detecting vibrations in said loadwheel caused by forces other than the forces applied by said tire; and,
 - d) means for subtracting said vibration induced forces from said tire imposed forces whereby more precise tire uniformity data is obtained.
2. (Amended) The apparatus of claim 1 further comprising, ~~wherein said vibration sensor comprises an accelerometer and further comprises:~~
 - i) a scaler for scaling a signal generated by said accelerometer; and,
 - ii) means for subtracting said signal from a signal generated by said load cells.
3. (Original) The apparatus of claim 1 further including at least two accelerometers, one of said accelerometers for detecting vibrations that impose forces in a lateral direction defined as a direction that is parallel to an axis of rotation of said tire and a second accelerometer for detecting vibrations that produce forces in a radial direction.
4. (Original) A tire uniformity machine comprising:
 - a) a loadwheel assembly;
 - b) a tire testing station including a tire holding device for holding and rotating a tire in said tire testing station;
 - c) means for rotating said tire in said tire testing station;
 - d) means for contacting said tire with said loadwheel;
 - e) means for measuring forces imposed by said rotating tire on said

loadwheel;

- f) detecting means for detecting vibrations exerted on said loadwheel by forces generated by components within said tire uniformity machine other than said rotating tire;
- g) said detector means including an accelerometer and a scaler for scaling a signal generated by accelerometer in response to said vibrations;
- h) differential summing means for adjusting a signal generated by said load cells to remove any component caused by said vibration.

5. (Original) The apparatus of claim 4, wherein said detecting means includes lateral and radial accelerometers that are used to detect lateral and radial component forces generated by said extrinsic vibrations.

6. (Original) The apparatus of claim 5, wherein said accelerometers are mounted within a spindle about which said loadwheel rotates, said lateral accelerometer being located coincident with an axis of rotation defined by said spindle and said radial accelerometer located on a diametral line defined by said spindle.

7. (Original) A method for improving the measurement of forces variation on a tire uniformity machine comprising the steps of:

- a) providing a load wheel assembly including a loadwheel rotatively supported on a loadwheel frame;
- b) providing load cells operatively connected to said loadwheel to detect forces imposed on said loadwheel;
- c) monitoring acceleration forces applied to said loadwheel by acceleration transducers;
- d) subtracting data obtained from said accelerometer transducers from overall load cell data to arrive at more precise tire uniformity data.

8. (Original) The method of claim 7, further including the steps of scaling said signals generated by said accelerometers and summing said signal in a differential amplifier to arrive at a net signal that does not include data related to said acceleration forces.

9. (Original) A loadwheel for use in a tire testing machine, comprising:

- a) a loadwheel body defining a cylindrical outer surface at least a portion of which is contacted by a tire being tested in a testing station;
- b) a fixed spindle defining an axis of rotation for said loadwheel body;
- c) bearing means for rotatably supporting said loadwheel body on said spindle; and,
- d) at least one accelerometer mounted to said spindle for detecting acceleration induced by said loadwheel by forces other than forces generated by a tire being tested.

10. (Original) The loadwheel of claim 9, further comprising a second accelerometer mounted to said spindle, said first accelerometer located coincident with an axis of rotation defined by said spindle and said second accelerometer located on a diametral line defined by said spindle.

11. (Original) The loadwheel of claim 10, wherein said first accelerometer is located within an axial bore defined by said spindle.

12. (Original) The loadwheel of claim 11, wherein said second accelerometer is located in a bore aligned with said diametral line.